REMARKS

Claims 2 and 4-12 remain in the application. Claims 1, 3 and 13-17 were previously canceled without prejudice. Claim 2 is hereby amended. No new matter is being added.

Substance of Examiner's Interview

Applicants thank the Examiner for the telephonic interview on November 28, 2007 regarding this application. The substantive technological differences between the claimed invention and the De Haan reference were discussed and agreed upon.

Per the Examiner's suggestion during the telephonic interview, this submission focuses on the substantive technological differences between the claimed invention and the De Haan reference. Favorable action is respectfully solicted.

Claim Rejections--Section 103

Claims 2 and 4-12 were previously rejected under 35 USC 103(a) as being unpatentable over DeHann (USP 6,937,655) in view of Doricutt (USP 5,329,309) further in view of Horikawa (USP 6,067,120). Applicants respectfully traverse this rejection.

Previously presented claim 2 recites as follows.

Claim 2: A method for interlacing a progressive video sequence to produce an interlaced video sequence of alternating odd and even fields, the method comprising:

obtaining at least two consecutive frames of a progressive scan video sequence;

segmenting at least one of said frames into constituent objects;

estimating a motion of said constituent objects between a first frame and a second frame of said frames;

using the estimated motion for each object between the first and second frames to determine an interpolated position for each object in an intermediate frame;

using the interpolated position for each object to construct the intermediate frame;

extracting a first alternating field from the first frame; and

extracting a second alternating field from the intermediate frame,

wherein the first and second alternating fields comprise the odd and even fields of the interlaced video sequence.

(Emphasis added.)

As shown above, amended claim 2 requires "**using the estimated motion for each object between the first and second frames to determine an interpolated position for each object in an intermediate frame**" and "**using the interpolated position for each object to construct the intermediate frame**". These limitations of claim 2 are supported, for example, by Fig. 5 of the present application, which is reproduced below for convenience of reference.

Intermediate Frame Interpolation

Segment position in first frame

Segment position in second frame

Interpolated segment position
in intermediate frame
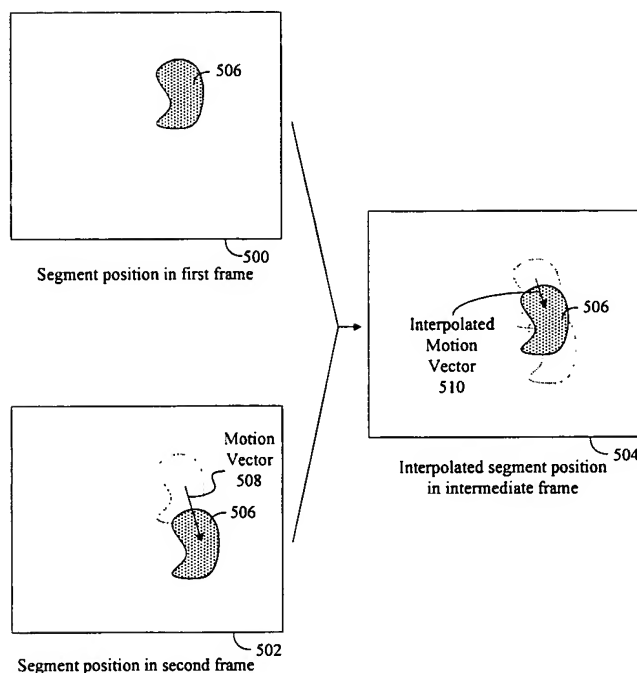
Fig. 5

The above figure shows the segment (object) 506 in the first 500 and second 502 frames, and the interpolated position of the object 506 in the intermediate frame 504.

Applicants respectfully submit that amended claim 2 is patentably distinguished over DeHann in view of Doricutt and further in view of Horikawa.

Regarding DeHann, applicants respectfully submit that DeHann does not teach the above-discussed limitations of claim 2. As indicated by the Examiner in the telephonic interview of November 28, the Examiner was previously using FIG. 2B in De Hann in relation to the rejection of these claim limitations. However, as discussed with the Examiner, FIG. 2B is a temporal **difference**

frame, which means that it shows the difference between pixels in two frames

(the frame shown in FIG. 2A and another frame). For convenience of reference,

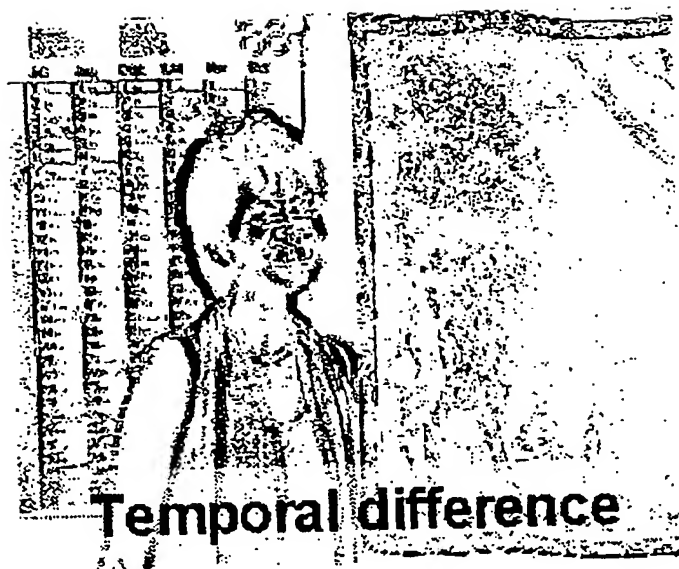FIGS. 2A and 2B of De Hann are reproduced below.

FIG. 2A

FIG. 2B

The temporal difference image shown above in FIG. 2B of De Hann is substantively distinguished from the intermediate frame 504 shown above in Fig. 5 of the present application and claimed per amended claim 2. In particular, while the difference image in FIG. 2B of De Hann is created by **subtracting pixel values** of one frame from another frame, the intermediate frame 504 shown above in Fig. 5 of the present application is created by **determining interpolated positions of objects** between two frames. This is a fundamental difference distinguishing claim 2 and De Hann.

Regarding Doricutt and Horikawa, applicants respectfully submit that neither Doricutt nor Horikawa teach "**using the estimated motion for each object between the first and second frames to determine an interpolated position for each object in an intermediate frame**" and "**using the interpolated position for each object to construct the intermediate frame**".

For at least the above discussed reasons, applicants respectfully submit that claim 2 is now patentably distinguished over the applied references.

Claims 4-12 depend from claim 2. As such, applicants respectfully submit that claims 4-12 are also patentably distinguished over the applied references for at least the same reasons as discussed above in relation to claim 2.

Conclusion

For at least the above reasons, it is respectfully submitted that pending claims 2 and 4-12 are now patentably distinguished over the applied references. Favorable action is respectfully solicited.
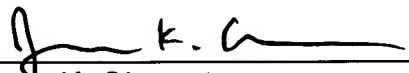
The Examiner is invited to call the undersigned for any questions.
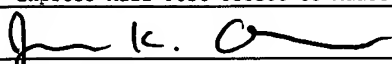
Respectfully submitted,

Gary R. Holt, et al.

Dated: <u>December 6, 2007</u>   By: _____

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Enclosure(s)

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